

REMARKS

Claims 1-9 are pending in the present application. Reconsideration and allowance of the claims is respectfully requested in view of the above amendments and the following remarks.

Claims 1-9 stand rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In addition, claims 1-9 stand rejected under 35 U.S.C. § 101 because the disclosed device is inoperative and therefore lacks utility. Both these rejections are in direct response to the applicant's "clarification" of the term "chamber." Obviously, our clarification has caused more confusion. As such, Applicants would like to further clarify the definition of the chamber in the last office action.

When Applicants used the dictionary definition, they did not intend to suggest that the chamber is a completely enclosed space or that the chamber is separated from the channels. Rather, Applicants were attempting to define the chamber as a cavity, which has a wider opening than the channels, which are connected to the chamber. As is clearly set forth in the specification and figures, the chamber is connected to the channels. Applicants did not intend to suggest otherwise.

In addition, because of the bigger size of the chamber as compared to the diameter/cross section of the flow channel for the second flow of gas, the chamber makes it possible to distribute the outlet openings for the second flow of gas according to the manner in which the mixer is operated. As such, the outlet openings can be arranged with a great degree of design freedom. See page 2, lines 16-19 and Figures 2-5.

Moreover, Applicants have amended claim 1 to specifically claim that the chamber is connected with a separate flow channel and that the chamber has outlet openings. Accordingly, Applicant respectfully requests that these rejections be withdrawn.

Claims 1-5 and 7-9 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by U.S. Patent No. 4,812,049 to McCall ("McCall"), or by U.S. Patent No. 5,456,533 to Streiff et al. ("Streiff"). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference."

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Verdegan Bros. v. Union Oil Co. of California, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the * * * claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claims 1-5 and 7-9 include the following limitation: "an incorporated surface arranged in the main flow channel which affects the first flow, the incorporated surface having leading edges that are orientated against the first flow and around which the first flow can move freely, the leading edge having components that act in a main direction of flow of the gas as well as transversely thereto, wherein the incorporated surface has a chamber which is connected with a separate flow channel for a second flow of gas for routing the second flow of gas through the flow channel into the chamber, and wherein said chamber being provided with outlet openings of the second flow of gas into the first flow of gas, and wherein the outlet openings are provided on a rear side of the incorporated structure, that faces away from an inflow of the first flow of gas."

McCall does not disclose all of those limitations. First, McCall does not disclose the leading edges that are oriented against the flow of the first flow of gas and around which the first flow of gases can move around freely, which causes the development of the vortex-field right behind the leading edges in the flow field behind the incorporated surface, thereby causing an early mixing of the two gas flows. McCall merely discloses an edge in which the gases move around. However, McCall does not disclose a leading edge that is oriented against the first flow and around which the first flow can move freely. As can be seen in Figure 1, element 12 is oriented so that it restricts the flow of gases through the conduit 11. Moreover, McCall does not disclose a leading edge having components that act in a main direction of flow of the gas as well as transversely thereto.

Second, McCall does not disclose a chamber in the incorporated surface, which is connected with a separate flow channel for the second flow of gas. In addition, because McCall does not disclose the chamber, McCall does not disclose the chamber being provided on the rear side of the surface facing away from the flow direction of the first flow of gas with outlet openings for routing the second flow of gas into the first flow of gas at the rear side of the structure.

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Thus, McCall does not disclose all of the limitations of claims 1-5 and 7-9. Accordingly, Applicants respectfully request that the rejection be withdrawn.

Streiff also does not disclose all of the limitations of claim 1-5 and 7-9. Streiff does not disclose a leading edge, which is oriented against the flow of gas and around which the flow can move freely. Instead, the mounting taught in Streiff is oriented with the flow and the deflectors and the mountings cause a reduction of the cross section in which the gas/fluid can flow. In addition, Streiff does not disclose a chamber in the incorporated surface, which is connected with a separate flow channel for the second flow of gas. In addition, because Streiff does not disclose the chamber, Streiff does not disclose the chamber being provided on the rear side of the surface facing away from the flow direction of the first flow of gas with outlet openings for routing the second flow of gas into the first flow of gas at the rear side of the structure.

Thus, Streiff does not disclose all of the limitations of claims 1-5 and 7-9. Accordingly, Applicants respectfully request that the rejection be withdrawn.

Claims 1-5, 8, and 9 stand rejected under 35 U.S.C. § 102(b), as allegedly anticipated by U.S. Patent No. 3,885,918 to Isahaya ("Isahaya"). "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Moreover, "[t]he identical invention must be shown in as complete detail as is contained in the * * * claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Claims 1-5, 8, and 9 include the following limitation: "an incorporated surface arranged in the main flow channel which affects the first flow, the incorporated surface having leading edges that are orientated against the first flow and around which the first flow can move freely, the leading edge having components that act in a main direction of flow of the gas as well as transversely thereto, wherein the incorporated surface has a chamber which is connected with a separate flow channel for a second flow of gas for routing the second flow of gas through the flow channel into the chamber, and wherein said chamber being provided with outlet openings of the second flow of gas into the first flow of gas, and

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wherein the outlet openings are provided on a rear side of the incorporated structure, that faces away from an inflow of the first flow of gas.”

Isahaya does not disclose all of those limitations. First, Isahaya does not disclose the leading edges that are oriented against the flow of the first flow of gas and around which the first flow of gases can move around freely. There is no leading edge. The corners of the rectangular part of the spraying apparatus and the corners of the frustum cannot be seen as a leading edge. Moreover, the corners are not oriented against the flow of gas. Moreover, Isahaya does not disclose a leading edge having components that act in a main direction of flow of the gas as well as transversely thereto.

Thus, Isahaya does not disclose all of the limitations of claims 1-5, 8, and 9. Accordingly, Applicants respectfully request that the rejection be withdrawn.

Claim 6 stands rejected under 35 U.S.C. § 103(a), as allegedly unpatentable over any one of Isahaya, McCall, and Streiff, taken in view of USSR 1599067A1 (“’067”). According to the Examiner, Isahaya (Figures 1 and 2), McCall (Figures 1 and 4; Column 3, lines 13-18, Column 3, line 48 -- Column 4, line 2), and Streiff (Figures 2, 11d, and 12; Column 2, lines 27-29; Column 3, lines 1-6, and 17-25; Column 4, lines 34-36) each alone substantially teaches Applicants’ invention as recited by Claim 6, except for the angle that the incorporated surface forms with the main gas flow direction being adjustable. The Examiner states that ‘067 (English Abstract; Figure) discloses an apparatus similar to that of each of the alternative primary references, wherein the angle of the incorporated surface (5), which delivers a secondary fluid into the main gas flow through the apparatus, is adjustable as dictated by the properties of the main gas flow stream. The Examiner states that it would have been obvious for an artisan, at the time of the invention, to modify the structures of the incorporated surfaces of any one of the alternative primary references, to be of adjustable orientation within the main gas flow, in view of the Soviet reference, since such would allow for any one of the alternative primary reference apparatuses to be readily adaptable to main gas streams of varying flow velocity and/or viscosity, among other variable stream parameters. Applicants respectfully traverse this rejection.

For an obviousness rejection to be proper, the Examiner must meet the burden of establishing a prima facie case of obviousness. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed.

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Cir. 1988). Establishing a prima facie case of obviousness requires that all elements of the invention be disclosed in the prior art. *In re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). Claim 6 depends from Claim 1. Therefore, in order to establish a prima facie case of obviousness for Claim 6, all elements of independent Claim 1 must be taught or suggested by the prior art references either alone or in combination.

As previously stated, neither Isahaya, McCall, or Streiff, teach or suggest all elements of claim 1. Applicants further submit that '067 does not cure this deficiency.

Rather, '067 teaches a cleaner comprising a horizontal casing (1) with phase pipes (2,3) and in sections (4) filled with packing (5) and having intermediate gas distributors (9) which are sloped sheets (English Abstract). The sheets rotate the gas stream before each successive section which, in turn, rotate perpendicular to the gas stream flow direction (English Abstract). Therefore, '067 does not teach leading edges, or a chamber on a rear side of an incorporated structure as claimed by Applicants.

Applicants accordingly submit that not all elements of Claim 1 are taught or suggested by Isahaya, McCall, Streiff, or '067, either alone or in combination. Because dependent Claim 6 includes all of the limitations of independent Claim 1, Applicants respectfully submit that not all elements of Claim 6 are taught or suggested by these references. Therefore, a prima facie case of obviousness has not been established for Claim 6. Therefore, Applicants respectfully request reconsideration and withdrawal of the rejection of Claim 6.


In view of the foregoing, it is respectfully submitted that the instant application is in condition for allowance. Accordingly, it is respectfully requested that this application be allowed and a Notice of Allowance issued. If the Examiner believes that a telephone conference with Applicants' attorneys would be advantageous to the disposition of this case, the Examiner is cordially requested to telephone the undersigned.

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In the event the Commissioner of Patents and Trademarks deems additional fees to be due in connection with this application, Applicants' attorney hereby authorizes that such fee be charged to Deposit Account No. 06-1130.

Respectfully submitted,

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